



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,646	01/31/2002	Mao Chen	08CS5966	2152

7590

06/05/2003

Hanh T. Pham
GE Plastics
One Plastics Avenue
Pittsfield, MA 01201

EXAMINER

XU, LING X

ART UNIT

PAPER NUMBER

1775

DATE MAILED: 06/05/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/062,646

Applicant(s)

CHEN, MAO

Examiner

Ling X. Xu

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,5-8,18,20 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3,5-8,18,20 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicants' amendments filed on 5/5/2003 have been entered. Claims 1-2, 4, 9-17, 19, 21-30 have been cancelled. In light of applicants' amendments, previous rejection based on 35 USC 112(2) and 102(b) are now withdrawn.

Election/Restrictions

2. Applicant's election with traverse of Group I in Paper No. 4 is acknowledged. The traversal filed in Paper No. 4 is moot because applicants have cancelled the non-elected claims.

The restrictions requirement is therefore made FINAL.

Specification

3. The disclosure is objected to because of the following informalities: on page 5, line 10, it is unclear if "hydrocarbonyl" should be hydrocarbon. Fourth line after the formula of the ionic or nonionic siloxane alkoxylate, Z can not be "H, -SH-, -NH2-" because they can not be linked to two groups as required for Z in the formula.

Appropriate correction is required.

Claim Objections

4. Claims 3 and 18 are objected to because of the following informalities:

In claim 3, line 19, it is unclear if "alkoylate" should be --alkoxylate--. In line 7 of page 4, it is also unclear if the "haloalkyoxy" should be -- haloalkoxy--.

In claim 18, line 21, it is unclear if "alkoylate" should be --alkoxylate--. In line 6 of page 6, it is also unclear if the "haloalkyoxy" should be -- haloalkoxy--.

Please clarify.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 5-8, 18, 20, and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 3 and 18, the first line after the formula of the ionic or nonionic siloxane alkoxylate, it is unclear if "hydrocarbonyl" should be hydrocarbon. The fourth line after the formula of the ionic or nonionic siloxane alkoxylate, Z can not be "H, -SH-, -NH2-" because they can not be linked to two groups as required for Z in the formula.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 3 and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Berger (US 4,499,149).

With respect to claim 3, Berger discloses a coating composition represented by formula listed at Col. 2, when Z is -HNCO-. The composition comprises a silicone compound free from sulfonic acid functional group, a water dispersible polyurethane compound and an aqueous solvent (Col. 56, lines 35-58, Col. 57, 40-46 and Col. 62, lines 21-25). The composition comprises the same material as claimed in claims 3 and 18.

With respect to claim 6, Berger discloses the co-solvent is polyester diol or glycol ether (Col. 56, lines 40-43).

With respect to claim 7, the silicone compound is chemically bound to the polyurethane compound as indicated in the formula stated above.

Since Berger discloses the same composition as claimed, the same composition will also have the same anti-fog function as claimed.

Berger meets the limitations of claims 3 and 6-7.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger.

As stated above, Berger discloses the coating composition as recited in claims 3 and 6-7.

Berger does not specify the amount of co-solvent and the amount of silicon compound and polyurethane polymer present in the coating.

However, Berger discloses that the composition comprises the same elements including the water dispersible polyurethane and silicone compound as claimed. Therefore, it would have been obvious to one of ordinary skill in the art to obtain the optimum or workable ranges of the polyurethane, silicone compound and co-solvent as claimed through routine experimentation, absent of showing evident of such range is critical.

Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235(CCPA 1955).

7. Claims 3, 5-8, 18, 20 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (US 5,932,405) in view of Berger.

Anderson discloses a photographic element comprises a water dispersible siloxane-containing polyurethane (abstract).

Anderson also discloses that the siloxane-containing polyurethane comprises more than 0.25% and less than 25% weight % of the siloxane component (Col. 5, lines 15-30).

With respect to silicone compound recited in claims 3 and 18, Anderson discloses that the siloxane is a diol or diamine in the preparation of the polyurethane which is represented by general formula listed on Col. 5, lines 1-20.

With respect to claims 5-6, Anderson discloses that the composition comprising additives (Col. 5, lines 35-67) and co-solvent (Col. 4, lines 53-60). The additives include abrasive particles, charge control surfactants (Col. 6, lines 1-30), and tertiary amines which are used to neutralize the acid (Col. 4, lines 45-50). The co-solvent includes N-methylpyrrolidone (Col. 4, lines 53-60).

With respect to claim 7, Anderson discloses that the water dispersible polyurethane features the inclusion of siloxane bonds in its molecule (Col. 4, lines 60-67).

With respect to claims 18 and 20, Anderson discloses that the photographic elements comprise various polymeric films and glass (Col. 3, lines 25-33), specifically, the support is made of polymeric films, such as polyester and acetate, or glass (Col. 7, lines 17-25). The protective layer can be served as an outermost backing layer on the support or an outermost layer coated on the top of an abrasion resistance backing layer (Col. 6, lines 30-40).

Anderson does not disclose the same silicon compounds as recited in claims 3 and 18.

Berger teaches a coating composition represented by formula listed on Col 2, when Z is -HNCO-. The composition comprises a silicone compound free from sulfonic acid functional group, a water dispersible polyurethane compound and an aqueous solvent (Col. 56, lines 35-58, Col. 57, 40-46 and Col. 62, lines 21-25). The composition comprises the same material as claimed in claims 3 and 18.

With respect to claim 6, Berger teaches the co-solvent is polyester diol or glycol ether (Col. 56, lines 40-43).

With respect to claim 7, the silicone compound is chemically bound to the polyurethane compound as indicated in the formula stated above.

Since Berger teaches the same composition as claimed, the same composition will also have the same anti-fog function as claimed.

Berger also teaches the siloxane unit can be incorporated into polyurethane composition to enhance the oil and water repellent properties with improved temperature resistance (Col. 52, lines 60-67 and Col. 62, lines 20-26).

Therefore, it would have been obvious to one of ordinary skill in the art to incorporate the siloxane compound disclosed by Berger in the polyurethane coating composition in order to obtain a polyurethane coating with enhanced oil and water repellent properties. It would have also been obvious to one skilled in the art to apply the coating onto Anderson's glass or plastic substrate because of its enhanced oil and water repellent properties.

Response to Arguments

8. Applicant's arguments filed on 5/5/2003 have been considered but are moot in view of the new ground(s) of rejection.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling X. Xu whose telephone number is 703-305-0395. The examiner can normally be reached on 8:00 - 4:30 Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah D. Jones can be reached on 703-308-3822. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Ling X. Xu
Examiner
Art Unit 1775

lx

LX

May 31, 2003


DEBORAH JONES
SUPERVISORY PATENT EXAMINER